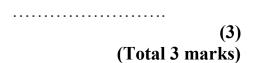


1. Simplify fully

$$\frac{x^2 - 3x}{x^2 - 8x + 15}$$



2. (a) Simplify $\frac{20a^2}{4ab^2}$



(b) Simplify $\frac{x-3}{x^2-9}$

(2) (Total 4 marks)

3. Simplify fully $\frac{4a-20}{a^2-25}$

.....(Total 3 marks)



4. Simplify $\frac{x^2 + 5x + 6}{x + 2}$

(Total 2 marks)

Simplify **5.**

$$\frac{4x^2 - 9}{2x^2 - 5x + 3}$$

(Total 3marks)

Write as a single fraction $\frac{4}{x(x+3)} + \frac{5}{(x+3)}$

(Total 2 marks)



7. Write as a single fraction in its simplest form

$$\frac{4}{x+5} + \frac{1}{x-3}$$

8. Simplify fully

$$\frac{3(2x+1)}{4x^2-1}$$

(Total 2 marks)



Solve the equation 9.

$$\frac{x}{2x-3} + \frac{4}{x+1} = 1$$

$$x =$$
 (Total 5 marks)

10. Simplify fully $\frac{3x+6}{x^2-4}$

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11. Solve the equation

$$\frac{3}{x+3} - \frac{4}{x-3} = \frac{5x}{x^2 - 9}$$

$$x =$$
 (Total 4 marks)

12. Solve $\frac{5(2x+1)}{3} = 4x + 7$



13. Simplify

$$\frac{6x^2 + 7x - 3}{9x^2 - 6x + 1}$$

(3)

(Total 5 marks)

14. (a) Solve $\frac{40-x}{3} = 4+x$

 $x = \dots$ (3)

(b) Simplify fully $\frac{4x^2-6x}{4x^2-9}$

.....

(Total 6 marks)

(3)



15. (a) Solve $\frac{3}{x} + \frac{3}{2x} = 2$



(b) Using your answer to part (a), or otherwise,

solve
$$\frac{3}{(y-1)^2} + \frac{3}{2(y-1)^2} = 2$$

$$y =$$
 or $y =$ (3) (Total 5 marks)